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SOCIAL EFFECTS OF RAILWAYS.

THE spread of ideas, as well as the conveyance of persons and of merchandise, depends almost entirely upon means of transit. Ships, roads, and canals, therefore, are the most powerful of all agents of civilisation and social advancement; and it follows, that the more either of those means of communication is improved, the more rapid and effectual will be the spread and increase of social and intellectual happiness. The vast revolution which has been made during the last forty years in road-making, has done its part in causing a corresponding alteration for the better in the condition of every branch of society in Great Britain. That change has received a vast impetus from the introduction of railways, and we purpose to point out some of its workings, now that 'steam and rail' are in full operation.

The earliest system of roads by which this island was intersected, was that laid down, and gradually executed by the Romans. This system was so admirable, that it has never been materially departed from; and it is not a little singular that in England the general direction of the old Roman roads, and that of the modern railway lines, are identical. The Roman 'Watling Street,' which ran diagonally across the country from Chester in the north-west to Dover in the south-east, is now replaced by the Dover, London, Birmingham, Grand Junction, Chester and Crewe railways. The ancient 'Foss Way,' between the Humber and Exeter, which intersected the above, is now partly supplied by railways, some of which are in progress, others in full operation. The route of the 'Ermine Street'—which began at Newhaven in the south, and ended at the mouth of the Humber in the north—is now followed, with little deviation, by the series of railways which have been made between Brighton and Hull through London. The 'Antonine Way' is now the 'Great Western'; and when the South-Western line of railway shall have been completed to Exeter, it will nearly correspond to the Roman road thence to London, also called the 'Antonine Way.'

The reason of this union of ancient and modern lines, is the influence which the former exercised in determining the position of towns. The Romans originally constructed their roads simply to convey their armies into the different parts of the island; but a series of military stations having been established along them, these camps were never wholly abandoned, and became in course of time villages, towns, and cities. Lincoln, for example, was originally a Roman station called Lindum, which was established at the point of junction of the Ermine Street and the Foss Way. Leicester occupies the site of Rata (an important Roman station mentioned in the itinerary of Antonine) on the Foss Way. Chester, again, replaces a station established at a point where Watling and North Watling

Streets joined, and was, according to Camden, the head-quarters of the twentieth Roman legion. By the North Watling Street it communicated with York; and both these places once established as towns, communication was ever after maintained by a route which deviated little from the original road that connected them; consequently, the direction of North Watling Street, and of the railways between Chester, Liverpool, Leeds, and York, are nearly the same. The roads, therefore, constructed at first for the temporary convenience of military marching, gradually becoming studded with towns, have still continued lines of communication between such places as rose to importance. Hence it is that the main lines of road have remained nearly the same throughout England, because they connect her most ancient cities.

The not very important deviations which were made from the oldest roads, arose from improvements in engineering. The Romans looked out for fords, and were not deterred by elevated ridges, over which to carry their 'ways;' but more modern road-makers, in improving the old roads, went round the bases of hills; and, having more permanent views, built bridges. By the side of these deviations villages and towns gradually sprung up, because of the readiness of communication with the great cities which were the termini of the roads. After a time, however, when the mineral riches of the country began to be known and appreciated, men congregated near to where those treasures existed—around the mouth of the coal-pit or the mine; and to this our great manufacturing towns, such as Leeds and Birmingham, owe their origin. Roads had to be made to and from them, and these roads form the greatest deviations from the Roman lines, though they do not alter the general direction of the old ones throughout the country.

We have made these preliminary remarks, to show what share roads have had in distributing the population over this country in cities, towns, and villages, and consequently what share they have had in bringing about our present social condition. We are now able to point out the further changes which are in progress through the introduction of railways. The most important of these changes is exactly that which always occurs in deviations from old lines, namely, the springing up of new towns upon those deviations. In planning a new railway, two great considerations operate; the first, to direct it through the most level parts of a tract of country so as to avoid expense in formation, arising from excavating, tunnelling, and embanking; and the second, to make it near to the greatest number of populous places that happen to lie between the extreme points, so as to secure a profitable return of capital when finished: the question is of certain expense on the one hand, and of probable profit on the other;

and where the former is likely to exceed the latter, the line is taken in a new direction. When this is the case, railway stations are often erected where no houses ever previously existed, and out of which towns will gradually arise as they did out of the Roman military stations. This has indeed already happened in several instances. On the Birmingham railway, a station was made at Wolverton, about midway from London, the company erecting a refreshment-room and a few sheds for their engines. Around these buildings a town has rapidly sprung up, and is so well populated, that the railway directors built and endowed a church, which was consecrated at the beginning of this year.—The similar rise of a small place called Slough, on the Great Western road, is somewhat singular: it lies about a mile and a quarter north of Eton College, and the authorities of the academy successfully opposed the erection of a station so near the school; clauses to prohibit any stoppage at the place having been inserted by their influence in the act of parliament. The masters were afraid that the temptation to 'run up to town' rather often would be too strong to be resisted by their pupils; for the distance is only eighteen miles. The company, however, knowing how great the accommodation would be to the public in the neighbourhood (of which Windsor forms a part), ventured at first to set down and take up passengers near the village. The heads of Eton College immediately attacked the railway directors with proceedings in Chancery. These, however, ended amicably: the Eton authorities withdrew their opposition; and now there exists at Slough the finest and best frequented station in England, habitually used not only by the sovereign and the court, but by some of those who, a few years before, instigated hostile proceedings. The new hotel at Slough is almost a town in itself, being one of the largest and most completely fitted with out-offices in Great Britain.—In like manner, the South-Western railway brought at least one new town into existence near Kingston-on-Thames, called New Kingston. It has a fine crescent, shops, and every requisite for a population of no mean number.

These are instances, amongst many others which could be enumerated, which show the chief social change which the existence of railways is bringing about, namely, the creation of new towns. Were it not for this new mode of travelling, the demands for increased household accommodation, called for by our rapidly augmenting population, would have been solely met by the enlargement of towns, cities, and villages already in existence.

Not the least important effect produced by the existence of railways, is the facilities they have afforded to the humbler ranks for recreation. Short trips to celebrated or picturesque localities are frequently organised, to give the working-classes the opportunity of seeing that which they would never have been able, under the old stage-coach and wagon dynasty, to behold. Thousands of the hard-working inhabitants of Glasgow, for example, would never have seen Edinburgh but for the railway. Now excursions are frequently made, of which a vast number of the Glasgow operatives are able to avail themselves, on account of the extreme cheapness to each individual with which they are got up. In the same way the Birmingham workmen have had, on several occasions, opportunities of visiting London which would otherwise have been denied to them. A few months ago an excursion was undertaken between London and Boulogne, on the Folkestone line, at a cost to each partaker which brought it within the reach of persons in a comparatively humble rank of life. These persons would have never been able to get a peep at France but for the facilities created by railways.

Shorter country trips in the neighbourhood of large towns are *always* to be had by railway at a cost far below that under the old system. In manufacturing

towns, where the greatest number of persons are congregated, the effects produced in this respect by railways have been most beneficial. The artisan, cooped up, and constantly breathing bad air, has now the opportunity, on every available holiday, of making excursions into the country. Though the means provided him for such healthy relaxation are not derived directly, yet they have been produced indirectly, by railways, which have driven the old modes of travelling into new channels. Coaches are now running in districts in which no such accommodation previously existed. In consequence of some modification in the stage-coach duties—of which railways were undoubtedly the origin—spring-vans and other vehicles are occasionally chartered with freights of happy faces, on their way to some delightful scene at a distance from some smoky town. By this means of transit the Londoner, for example, is able to visit Hampton Court, Greenwich Hospital, or Dulwich College, where, besides beautiful scenery, he has access to the best public collections of pictures in the country. The humanising effects of these excursions are negative as well as positive. They prevent the operative from making a bad use of his holiday, while they supply him with recreation at once healthy and intellectual. We say nothing of the opportunities afforded by local steamboats in towns placed upon navigable rivers, such as London, Glasgow, and Liverpool; although the influence railways has exercised over them, has been to bring them into competition, and to cause a general reduction of fares.

Another good effect brought about by railway travelling is, in conjunction with other influences, a visible breaking up of that exclusiveness—a gradual thawing of that reserve—for which the people of Great Britain are celebrated. Formerly, each class of persons had their own separate modes of travelling. There was the private carriage and post-chaise for the rich and noble, the mail for the country gentleman, the stage for the tradesman, and the wagon for the poor. The circumstances of a man were inferred according as he travelled inside the mail, or inside a stage-coach, or outside either of these vehicles. All were kept separate and distinct, the uneducated never having opportunities of profiting by the manners or knowledge of the educated. A railway train materially alters, and will at no distant period, we predict, reverse the picture. It takes masses of people from one place to another, of all ranks and conditions; and though there are 'classes' of carriages for the accommodation of people of different ranks and means, yet the third-class, designed for the poorest travellers, are, in fine weather, much used by the rich also. To this two considerations conduce—the superiority of these carriages for a look-out and for the enjoyment of the open air in fine weather, and the common regard for economy. In the last number of the Quarterly Review, it is declared that a certain member of parliament habitually rode in the third-class carriages in going backwards and forwards between the town he represented and 'his place' in parliament. Nay, the reviewer himself owns to having ridden to Brighton in a third-class train. Lastly, certain magistrates of Glasgow have been observed to content themselves with a 'stand' in the cheapest part of the train from their own city to Edinburgh. The motives here may not be unmixedly good; and we have already expressed our regret that the frequenting of third-class carriages by wealthy people should have had the effect of lowering the character of the accommodation for the poor, directors being naturally anxious to drive as many of the rich as possible to the higher-priced vehicles. But, however this may be, the effect of such a commingling of ranks is certain. The rich are brought into contact and converse with the poor, sympathies are engendered between the two classes, and the intelligence and manners of the higher ranks descend to the lower. By a new act of parliament, opportunities for the companionship of intellectual with ignorant, of rich with poor travellers, are to be much increased; it being rendered imperative for

every company to provide the public, under certain conditions, with carriages at a penny per mile.

Again, railways, holding out so many temptations for travelling, have wonderfully increased it; and nothing opens men's minds, whatever be their grade, so much as seeing a variety of things, of places, and of men. By comparing them one with the other, ideas expand, facts accumulate, and prejudices vanish. The greater the number of travellers, then, the greater the intellectual advancement and social improvement; and let us see to what extent personal locomotion has increased of late. There is no means of ascertaining correctly what number of journeys was performed in England during the stage-coach times, but the parliamentary returns enable us to learn the quantity of travelling by railway only which took place in 1843. In that year, upon the seventy railways then in operation, no fewer than 25 millions of passengers were conveyed 330 millions of miles. In other words, a number of journeys was performed in England greater by nine millions than the gross population of England and Wales, and over a distance more than three times greater than the space between the earth and the sun! And this, at a very moderate calculation, could have been scarcely two-thirds of the gross amount of land-travelling by these and all other conveyances. Taking this supposition to be correct, the number of miles travelled over in England alone in 1843 would be 440 millions. Porter ('Progress of the Nation,' volume ii. page 21) estimates the number of miles traversed in 1834 by stage-coaches in the whole of Great Britain at 358 millions; consequently the increase in land-travelling in England alone has been 92 millions of miles in eleven years.

One other view in which the social influence of railways must be regarded, and we have done. They have been the means of circulating vast sums of money through legitimate channels. The seventy railways, finished by 1843, were formed at a cost of £34,360 per mile, amounting in all to upwards of sixty millions of pounds sterling. Nor must this be looked upon as a mere temporary distribution of capital consequent upon their original formation. Railways are gigantic distributors of money while in operation: to say nothing of outlay in the cost of repairs, machinery, and servants, the income from passengers was, during the year 1843, 1½d. for each of the 330 millions of miles—in all, 24 millions of money disbursed in railway travelling.

These are a few of the most obvious considerations presented in viewing the social changes railways are, with their characteristic rapidity, effecting. And even these, few as they are, must cause us to regard them not only as instruments of convenience and comfort, but as powerful agents in the advance of civilisation.

LEGENDS OF THE LOIRE.

JEAN LOUIS.

A TALE OF GUERANDE.

The flood of civilisation and social improvement which it is asserted has rolled over the hills and valleys of France, has not been universal in its extent. There are various spots which seem placed beyond the reach of the movement. Having little or no direct communication with Paris, and connected with the chief town of the department by a bad and unfrequented route, the inhabitants of these isolated districts hear of the events which take place, of the changes and chances of society, of railways and steam-engines, gas lights and constitutional kings, without considering themselves as in any way concerned in them, and regard those who are, rather with feelings of contempt than of envy. This is the case more particularly in some parts of Bretagne, where the people cling with the greatest pertinacity to old habits and usages, rejecting, with proverbial obstinacy, every alteration, be it for better or

for worse. One of the spots in which the habits and manners of bygone ages are most peculiarly preserved is Guérande. Placed amidst the sand-hills and marshes where the Loire joins the ocean, between the ancient towns of Croisic and the Burg of Batz, it has preserved even its outward appearance intact from the innovation of modern habits and manners. Circumscribed within its ancient walls and ditches, with streets not wider than an omnibus and a half, its battlements unimpaired, its three gates showing the apparatus for elevating or letting fall the ponderous portcullis, and its wooden drawbridges, though no longer raised at sunset, still in a state to be so, everything about the town preserves the same primitive character; the upper storeys of the houses resting on solid pillars of wood or stone, and forming galleries, under which the passengers are secure from rain or sunshine; the shops small and low, their fronts covered with slates fastened over one another like the scales of fish; the windows ornamented with carved wood-work, which projects into the street in some places even beyond the pillars, in grotesque faces, or lengthened out into fantastic animals of some unknown or extinct race, whose remains are to be found only in museums. The population of Guérande is not numerous; and in consequence of the absence of the busy trade of more modernised towns, the passing traveller wanders through silent and deserted streets; and if he meets with a well pipe-clayed gendarme, or some such emblem of recent days, is startled at the anachronism, and would have been less surprised at encountering a warrior in the costume of the middle ages; for the dress of the Bretons in general might pass for that of any era. The geographical position of Guérande in some measure accounts for all these circumstances. It possesses but two roads, one leading to the chief town of the arrondissement, and but little frequented, the other to St Nazaire, which is six leagues distant. It has no speculations in trade to bring visitors, and the few strangers who make their appearance are chiefly invalids, who come for the purpose of sea-bathing, and the advantages of so retired and economical a situation.

Even the arrival of a strange beggar, some five-and-twenty years ago, was the subject of a nine days' wonder; more especially as he seemed inclined to take up his abode in Guérande, and differed from the native population, and even from persons of his class, in his habits and appearance, which were those of a person of education. It was supposed at the time that he was one of the unfortunate persons ruined by the Revolution, and proscribed by the parties in power, which supposition was aided by a report that he was possessed of some remains of property; but no inquiries could elicit anything from him, though the supposed circumstances of his history strongly predisposed the royalist population in his favour. He neither confirmed nor denied the passing rumours, but quietly took his station at the door of the church as a regular mendicant. With many of the inhabitants it became customary to bestow upon him a weekly alms. Amongst those who did so was the Abbé Sorel, who officiated at the matin service, and who had been from the first struck by his appearance and singular conduct, though he could never extract from him any particular of his past history. The stranger went by the name of Jean Louis, and took up his residence in a large and nearly deserted mansion in one of the most desolate parts of the town; but no one was ever permitted to enter his domicile, for which he very regularly paid a small rent, which was never in

arraire. He was not obtrusive in his habits of mendicancy, but quietly awaited the charity of the worshippers in silent resignation. Amongst persons of the same class he was regarded with deference; and in case of any dispute arising amongst them, was appealed to as an umpire, by whose decision every one was contented to abide. Amongst other singularities of Jean Louis, was that of his never being known to enter the church, though there was little doubt of his being a Catholic, and deeply impressed with religious feeling.

At length the Abbé Sorel, on entering the church one morning, missed his pensioner from his usual place. The next day he was still absent; and on the third morning, Jean Louis not having made his appearance, the worthy priest, making himself acquainted with the residence of the poor man, resolved to seek him out, and ascertain the cause of his continued absence. With some difficulty he discovered the dreary abode of the beggar: in one corner of a ruinous court, once the residence of a Breton noble, he found a dark winding staircase, which conducted him to a low arched door, where he knocked for some time without being able to gain admittance. At length a small grating was withdrawn; and the person within having ascertained who the visitor was, removed the bar which impeded the entrance, and the priest was admitted into a small dark chamber by the mendicant himself, who was evidently suffering from severe illness and bodily weakness. He made a hurried apology for having detained the abbé so long; and then, after some slight hesitation, during which he seemed to form some sudden resolution, requested him to follow him, at the same time throwing open the door of an inner chamber. The first room into which the priest had been admitted was a dark and miserable abode, unfurnished, and with every appearance of desolation and poverty; the second, to his infinite amazement, was furnished not only with comfort, but with considerable luxury, though the articles were generally of no modern date. As they entered this chamber, Jean Louis seemed labouring under great mental agitation as well as bodily weakness. He, however, placed a chair for his guest, and then staggered to a heap of straw covered with a coarse rug, which was placed on one side the room, and contrasted strangely with the various articles of comfort with which it was surrounded. For a few moments the priest was silent from surprise, till a deep groan from his companion roused him, when, advancing to the spot where the beggar had fallen exhausted on his rug, he took him by the hand, and said in kindly accents, 'Jean, my friend, you seem to possess every means of relief for your bodily wants, but the mysterious circumstances in which I find you placed, lead me to suppose that there is some secret sorrow or some secret sin, which only religious consolation can relieve; is it not, then, the hand of Providence which has brought me here to console your solitary wretchedness? As your friend and spiritual guide, I intreat of you to confide in the divine mercy, and you will receive comfort and support.'

'There is no relief, no consolation, no mercy for me,' wildly exclaimed the sick man.

'Such doubt and such despair,' mildly replied the abbé, 'are more criminal than you are aware of; there is mercy for every repentant sinner.'

'But none for me, none for me,' groaned the unfortunate; 'for ingratitude of the blackest dye, for robbery, for murder, nay, almost for parricide; no, no, there can be no mercy for me.'

'By faith and penitence, every sinner may have hope.'

'Penitence, penitence,' murmured the beggar; 'can penitence obliterate sins like mine?'

'There is an atonement beyond the penitence of man,' replied the abbé; 'have faith in that atonement, and you will receive hope and consolation.'

Jean Louis moaned in heartfelt agony, but made no reply; and the priest kneeling by his side, prayed long and earnestly. This seemed to tranquillise the mind of the sufferer in some degree; when, suddenly rising, he seized the hands of the abbé, and exclaimed, 'Hear the tale of my iniquities, and then say if hope or consolation can exist for me.'

'Hope exists for all men, if that hope be fixed aright,' replied the priest, who, at the desire of the penitent, placed himself in his seat. The beggar then knelt before him, and midst many sobs and groans, which at times interrupted his narrative, told the following history to the attentive priest:—

He was, he said, the son of a poor vigneron in Burgundy, and at an early age had been taken into the family of the lord of the village, a nobleman of wealth and distinction, who intended to bring him up as a valet for his son, a youth a year or two younger than Jean himself; but having shown some talents, and a considerable readiness in acquiring information, his destiny was changed, and he was educated with his young master, and at length became a confidential secretary. But the revolutionary storm had become darker and more threatening; his master took the alarm, secured considerable sums in foreign funds, and providing himself with a sufficiency of ready money, removed his family in secrecy to a retired spot near Paris, where, under a feigned name, and an appearance of poverty, he for some time escaped from suspicion and from danger. With the exception of his wife and children, Jean Louis was his only confidant; on him he relied, as on his own son, and from him nothing was concealed. At length, prompted by avarice and ambition, the faithless wretch conceived the infernal purpose of denouncing his paternal benefactor; and hoped, by involving the whole family in destruction, to possess himself of the secret funds, of the particulars of which he was well informed. For some time he hesitated; but the suggestions of evil triumphed, and he betrayed to the revolutionary tribunal the retreat of the proscribed family; of whom the son only escaped, being by chance at the time separated from his devoted kindred. The faithless traitor went so far as even to appear as a witness against his benefactors, and consigned them to the scaffold. By accident he was in the streets of Paris as the fatal vehicle conveyed his victims to the slaughter, and the eye of his master fell upon him, and recognised him amongst the crowd; the glance was momentary, but its effect was enduring: it came like the blasting fire of heaven; it awoke within him torments never ceasing, and most intolerable—a remorse and agony which no bodily suffering could have equalled. He fled from Paris, possessed indeed of the spoils of his murdered benefactors, but with a resolution never to enjoy them: he determined to bury himself in the most retired spot he could find, and to pass his life in poverty, surrounded by his guilty wealth, and by every thing which should recall his crime to his hourly remembrance. To that end he had transported the remnant of his master's furniture to Guérande, and brought with him the portraits of the murdered family, that they might be for ever before his eyes; at the same time he pointed to the pictures on the wall.

The abbé, who had listened with intense anxiety to the tale, grew pale as it advanced; and when it reached this point, following the direction in which the penitent pointed, he started to his feet and exclaimed, 'Merciful heaven! my father! and my mother!' The beggar, with a loud and piercing scream, fell senseless on the floor.

After a time spent in mental prayer, the abbé raised the fallen man, placed him on his low couch, and forced some water down his throat; after which he began gradually to recover; but it was some time before he was restored to full consciousness, and then raising himself on his knees, he said in a faint voice, 'Is there pardon for such a wretch as I?'

'For you and for all men,' replied the abbé solemnly.

'And can you pray for me?' The abbé fell on his knees and poured forth an ardent prayer for the sinner, who prostrated himself in silence before him. When the priest sought to raise him—he was dead.

POPULAR INFORMATION ON SCIENCE.

DISPERSION OF PLANTS BY THE LOWER ANIMALS.

THE distribution of plants over the earth's surface is influenced by conditions of soil, heat, moisture, light, altitude of situation, and various other causes; for, did they flourish independently of these conditions, then there were no reason why the vegetation of one part of the globe should differ from that of another. Situations, therefore, which present similar circumstances of soil, climate, &c. are capable of being peopled with the same races of plants, and if they are not so now, it is because the seeds or roots of such vegetables have not been transported to them. The agents which aid the dispersion or migration of plants are of various kinds, and are unconnected with the causes which limit their geographical distribution. Many seeds, for example, drop from the parent stalk, spring up into a new series of stems, which in turn give birth to another race of seeds, and these again to another circle of vegetation. Thus any tribe of plants would spread from a common centre till arrested by the influences which limit its range of habitat; and this mode of dispersion no doubt occasionally occurs. In most plants, however, the seeds are small and light, and easily borne about by the winds; some are downy, and furnished with wings; others have buoyant tufts and filaments; and many, when fully ripe, are ejected from the vessels which contain them with considerable force. All these appendages and peculiarities are evidently intended to facilitate their dispersion, which is further assisted by rivers and other currents of water, by adhering to the coverings of quadrupeds, by being swallowed and subsequently voided by birds, and by the economical pursuits of man, whether accidental or intentional. The seeds are arrested in their progression by various causes: some are furnished with barbs and hooks, which lay hold of objects; others become entangled amid herbage, the mud of rivers, or the softened soil of winter; while many towards spring are acted upon by the heat of the sun, so as to emit an adhesive substance, or their fleshy pericarps melt down into the soil, carrying the embryo along with them. In all, the appendages which aid their migration begin to decay at the proper season, and so are unfitted any longer to transport them. The seeds thus dispersed spring up and flourish, if they find in their new habitats all the conditions necessary to their growth; if they do not, they either lie dormant, or die after an abortive struggle with the obstacles of soil, climate, drought, or moisture, which oppose them.

From what has been stated, the reader must perceive that the geographical distribution, and the dispersion of plants, are two very different things—the former being regulated by immutable physical conditions, and the latter being dependent on agents the most capricious and irregular. Among these agents the lower animals form one of the most curious and interesting, and to them we at present exclusively devote our attention. The modes in which the lower animals aid in the dispersion of vegetation may be classed under three great heads—namely, by the seeds adhering to their hair or wool, and being thus carried to great distances from the parent plant; by being swallowed by the animals, and subsequently voided entire and uninjured; and by being

dropt and lost during the act of feeding, when bearing them from one place to another, or after having secreted them for winter provision. There may be other accidental modes in which they facilitate this dispersion, but the above are the most apparent and intelligible.

Many seeds or seed-vessels, like those of the burdock, teasle, woodruffe, &c. are furnished with hooks and barbs which readily lay hold of any floccy substance, as wool and hair; and there can be no doubt that animals of the sheep and goat kinds materially aid in the dispersion of these and other plants whose seed-vessels are similarly constructed. These animals in a state of nature are almost ceaseless wanderers, here passing through a clump of thistles, burr-docks, and the like, there grazing among prickly shrubs, or crushing their way through thickets; and during each of these operations insensibly carrying off seed-vessels, and portions of branches with fruits and berries, which in course of time are dropt in other localities. Again, animals, as the ox, buffalo, camel, horse, &c. as they wander through their pasturages, must aid in a similar manner the dispersion of plants: during the season when they are casting their shaggy coverings, they are prone to rub themselves against every shrub and tree, and are thus placed in more frequent contact with seeds and seed-vessels. This liability of seeds to become attached to the hair or wool of animals, is increased by the structure of the seed-vessels, which are often hooked and barbed, and which, when fully ripened, so distend and recurve, as absolutely to bristle with points of attachment. Thus, for example, in the cones of the fir tribe, the scales are smoothly imbricated over each other when the seed is green, but begin to separate and curl back when it is ripe, and thus readily adhere to any loose or shaggy substance. To what extent plants may be dispersed in this manner, it would be fruitless to attempt an estimate; but any one who has wandered through a pasture field on a sunny day in autumn, and seen the number of grass and other seeds which adhered to his own clothing, or who has observed the fleeces of sheep in an extensive hill-run, the shaggy coatings of cattle as they rolled among the herbage, or rubbed their way through brake and thicket, can have no difficulty in conceiving how the wool and hair of quadrupeds should become instrumental in the dispersion of plants over districts where they were formerly unknown.

That trees and plants are ever disseminated by the animals which feed upon their seeds, has been denied by certain naturalists, who contend that the seeds and fruits are comminuted and destroyed in their passage through the stomach. This, however, is by far too sweeping an assertion, and one which every-day observation sufficiently contradicts. There is nothing more common than to find gooseberries, raspberries, and brambles grow up in situations where we know for certain that the seeds from which they sprang must have passed through the human stomach; or to find stalks of oats and barley in localities where the seeds must have as surely passed through the intestines of the ox or horse. No doubt such cases are, as they must be, the exceptions to the general rule; for, were it otherwise, the fruits and seeds upon which animals feed could not possibly yield them their proper nourishment. Generally speaking, the proper food of truly granivorous animals is masticated, comminuted, and digested; but it frequently occurs that these animals swallow seeds and fruits which do not form their usual diet, and the consequence is, that a portion escapes through their stomachs uninjured. During certain

diseases, occasioned, it may be, by having partaken of unusual food, seeds and grains are still more apt to pass entire. Besides, it is not always the seed that forms the nutriment; the cherry, the plum, the haw, the elder-berry, and other fruits, are swallowed by birds not for the kernel, but for the pulp which surrounds it; and many of the birds feeding in this manner have their organs so constructed, that the stone or kernel cannot possibly suffer any injury in its passage through the stomach. On this point we are confirmed by Mr Jerdon, in a recent number of *The Zoologist*:—‘In those species,’ says he, ‘which live partly on berries and partly on soft insect food, like the thrushes, I am inclined to think that in some instances seeds pass through unhurt, particularly those which are of a hard texture, and which are enclosed in a pulp, as the berries of the elder and mountain-ash, and perhaps those of currants, gooseberries, &c. In the course of my own observations, I have found seeds of the elder entire in the intestines of thrushes and blackbirds, and I have also found hawstones in that of the latter bird. It is not at all surprising that the haw should be able to resist the action of the blackbird’s stomach, as it is of so very hard a nature, and I should be inclined to say that in general it does so. I am also of opinion that the seeds of the holly, which are somewhat similar to those of the haw, generally escape the grinding power of the gizzard. In some fruit-eating tribes, as the *Ampelide*, which have a wide and short intestinal canal, seeds of all kinds may, and probably do, pass through uninjured; and in omnivorous birds, as the crows, some seeds may casually and accidentally escape.’ Indeed we have positive evidence of the juniper and mistletoe being dispersed in this manner; and of acorns, taken from the stomach of a wood-pigeon, having so far preserved their vitality as, on being sown, to spring up into healthy saplings, outstripping in lusty vigour the oaks grown from acorns in the usual way.

It has been already stated, that birds which feed chiefly on fruits and berries derive their subsistence not from the stone, but from the soft pulpy pericarp, and therefore that in most instances the kernel passes through the stomach uninjured. A beautiful illustration of this is given by Mr Selby in his monograph on pigeons in the *Naturalist’s Library*:—‘The precious nutmeg, or rather its soft covering, known to us by the name of *mace*, at certain seasons affords a favourite repast to some species of the arboreal pigeons of the Indian Archipelago. This valuable spice for the nutmeg itself, which is generally swallowed with the whole of its pulpy covering, passes uninjured through the digestive organs of the bird, and is thus dispersed throughout the group of the Moluccas and other islands of the East. Indeed, from repeated experiments, it appears that an artificial preparation, analogous to that which it undergoes in its passage through the bird, is necessary, to insure the growth and fertility of the nut; and it was not till after many and unsuccessful attempts had been made, that a lixivium of lime, in which the nuts were steeped for a certain time, was found to have the wished-for effect, and to induce the germinating tendency.’ So it is with many other fruits and berries, the fleshy pericarps of which alone are edible, while their stones resist the digestive powers of these birds. And when we consider that pigeons are most voracious vegetable feeders, take long flights, and some of them even make distant migrations, we can readily allow them to be widely instrumental in disseminating the plants on which they mainly subsist. Nor is it mere herbs and lowly shrubs which may be thus dispersed, but some of the most gigantic trees of the forest, as the banyan and banana, whose fruit furnishes for the arboreal pigeons of the East a favourite repast. As with pigeons, so with many other birds: pheasants devour numbers of acorns in the autumn, some of which having passed through the stomach, probably germinate: linnets, goldfinches, thrushes, goldcrests, hawfinches, &c. feed on berries and stone-fruits, whose kernels resist

their powers of digestion, and are thus transported to places far distant from the parent plant, where they spring up and clothe the landscape with new vegetation.

The next palpable mode in which animals may facilitate the dispersion of plants, is by scattering the seeds when in the act of feeding, by dropping them when bearing them away to their retreats, or by forgetting the spots in which they had deposited them for winter food. An example under each of these heads will be much more convincing than a mere general statement. The brown linnet, when feeding on thistle seed, perches on the top of the weed, and tears the downy head asunder in order to reach the seeds which are attached to the receptacle. During this act, many of the grains being loosened, are borne away on their downy wings by the breeze to places far distant from the parent stem—the bird being in this case the indirect disseminator of the thistle. Were the head not torn asunder in this manner, ten to one but it would become soaked with the rains of winter, and fall down only a few inches from the original stalk, instead of being transported, as it often is, across many miles of country. What is here mentioned of the linnet may be witnessed in any thistly during some fine day in September, when the birds are feeding in flocks, and scattering the down in every direction. The greater part of the seeds is no doubt devoured by them, but a number also escape, a fact which the bird is well aware of, as it frequently gives chase to the stray ones as they are borne away by the wind. Again, birds often drop grains and berries while in the acts of carrying them to their retreats, and of feeding upon them. Thus the nut-hatch, having twisted off the boughs a cluster of beech-mast, resorts to some favourite tree whose trunk is rough and uneven, and tries by a series of manoeuvres to peg it into one of the crevices of the bark. During this operation the nuts sometimes fall to the ground, and being neglected by the bird, germinate and spring up into trees. Beeches are often found growing near the haunts of this bird, which have evidently been planted in the manner described. Lastly, as many animals are led by instinct to lay up a store of food against winter, it often happens that some of these stores are forgotten, and the seeds, nuts, &c. which compose them, left to germinate on the return of spring. A familiar and well-known example of this process is furnished by the habits of the squirrel, of which the following anecdote has been frequently told:—‘A gentleman walking one day in the woods belonging to the Duke of Beaufort, near Troy House in Monmouthshire, was diverted by observing a squirrel sitting very composedly on the ground. He stopped to watch its motions. In a few seconds the squirrel darted like an arrow to the top of the tree beneath which he had been sitting. In an instant he was down again with an acorn in his mouth, and began to burrow in the ground with his hands. After digging a small hole, he stooped down and deposited the acorn; then covering it, he darted up the tree again. In a moment he was down with another, which he buried in the same manner. This he continued to do as long as the observer thought proper to watch him. The industry of this little animal is directed to the purpose of securing him against want in the winter; and as it is probable that his memory is not sufficiently retentive to enable him to recollect the spots in which he deposits every acorn, the industrious little fellow no doubt loses a few every year. These few spring up, and are destined to supply the place of the parent tree. Thus is Britain in some measure indebted to the industry and bad memory of a squirrel for her pride, her glory, and her very existence.’

There can be no doubt, then, that plants are disseminated by the lower animals; but which animals are most active in the process, and to what extent their activity is effective, are problems in natural history, the solutions of which are yet but imperfectly discovered. As it stands, the fact forms one of the most interesting features in creative design—namely, that the lower ani-

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mals, without gift of foresight or intelligence, are instrumental in dispersing over the face of the globe those plants from which they in turn derive the means of subsistence.

THE CORK REGATTA.

NEWSPAPER descriptions of regattas are usually very dry affairs, and one generally gathers from them but an imperfect idea of a spectacle which, in reality, is cheerful and animated beyond most others. It occurs to us that the following extract from a letter written by a friend of ours after seeing the last Cork regatta, will be appreciated as a more suitable description of that kind of amusement. The writer is a playful kind-hearted professor belonging to a Scottish university. It is perhaps necessary to add, that he wrote for the amusement of a private circle only.

'Since I last wrote, we were on a visit of a week at the Priory, the residence of Mrs —, which I think I formerly mentioned is delightfully situated close upon the beach of the Cove.* * * As the Cork regatta was held at the time I was there, I must try to give you some idea of a spectacle which is considered to be the finest of the kind in the United Kingdom. It began on Monday last, and continued for three days. The first day was delightful; light airs floated here and there over the surface of the beautiful harbour, and promised, from the aspect of the sky, to settle into a fine summer breeze. Sitting in my bedroom, boats decked with flags passed from an early hour incessantly before me. I could hear the gay laugh of the rowers, while they plied their joyous task, with their oars glistening in the sun. Many of the boats had music, which came more mellow to the ear as it floated along the surface of the water. I need not say that the gaiety of the scene was greatly heightened by the circumstance, that every boat bore along a due proportion of the fair sex. A large steamer decked with flags has entered the Cove, bringing from a distance many a glad heart to enjoy the festivities of the day. But we must go out, and see how things look from the side of the garden. What a gorgeous sight! The standard of England is majestically waving from the opposite batteries, and hundreds of vessels of all forms are covered with streamers. Among these, the Resistance man-of-war, the magnificent war-steamer the Stromboli, and the Volage frigate, particularly attract attention. They are literally covered, from the different mast-heads to the deck, with the flags of all nations. The beautiful yachts which are to contend for the honours of the day are getting under weigh, and some of them, with their snow-white canvases, are already tacking towards the place of rendezvous. In the meantime let us shift our position, and get a little nearer to the place of starting, which is opposite the town of Cove. It is only a mile off, and we shall have a delightful view of everything that is going on, as we walk through the highly-ornamented grounds of Mr French, who has kindly given us permission to do so. We have now got, by our gradual ascent, about four hundred feet above the level of the water, and can distinctly discern the decks, with the persons walking along them, of the crowds of vessels which are moving in every direction below us. Come a little farther on, and from yonder point we shall be able to command a view of the whole. Did you ever see such a beautiful sight? Over a distance of more than six miles in every direction, the surface of the water is covered with shipping. Try to count them. It is impossible, favourably placed as we are for the purpose. Did you hear that gun? It is the signal for starting of the first race—a race of hookers. They are fishing vessels, duly rigged, and very different from our — craft. Only observe how well they sail. They have to make a run of forty miles before they return, so that it will be probably six

hours hence. That other gun is the signal for the sailing of the yachts, some of which belong to ports in England. What elegant sylph-like vessels they are! How swiftly they move through the water! It is now a fine steady breeze, and it would be impossible to have a more favourable day for the competition. Before we descend to the place of starting, let us remain here a little longer, and satiate our eyes with the magnificent and gorgeous prospect, so instinct with life and beauty. Cast your eye westward in the direction of Cork. You cannot see the town for the intervening hill, which you observe is covered with elegant villas, the grounds being decked to the water-edge with fine wood and beautiful green lawns. Happy Ireland! * * * For this day, however, all unpleasant subjects are forgotten, and crowds after crowds are pouring down from Cork in the steamers to be present at the regatta. Look now towards the east. The contending yachts are still in view, but in a short time they will quit the harbour, and stand out to sea. Many of a different class are tacking to and fro before the time arrives, when they too shall engage in the contest.

Let us now descend towards the town of Cove. From the windows of the different houses you can see people eagerly gazing at the lively and shifting scene below them. As we advance onward, the crowd gets more dense, and by and by we shall have some difficulty in forcing our way through the living mass. Take care of your pocket handkerchief; I have been eased of mine already, and fortunately will have no occasion to trouble myself farther about it. Now we have reached the enclosed space where the members of the regatta club have provided accommodation for their friends. Mr W— has furnished me with tickets, so that we shall at once get admission. Oh! a considerable number of ladies have got here before us; some of them are seated in open carriages, and others are sauntering about to vary their view of the scene. I see E— sitting in her carriage with her sisters-in-law. Our old friend, Sir William Dickson, is talking to them on one side, and Lieutenant Levinge on the other. The Volage frigate, so gaily fluttering with flags, is within a hundred yards of us. What is that on her maintop-gallant-mast-head? I declare it is one of the seamen, leaning with his breast on the very summit of the mast, and looking down with composure from that perilous position.

Another gun. A fresh race has started. It consists of six-oared barges. The rowers, composed of the best seamen belonging to Cove, are all stripped to their shirts for the contest: how they struggle for the lead! Another gun announces the return of the winning yacht. She ran over the distance (forty miles) in little less than five hours; she belongs to Mr French. Now the hookers begin to heave in sight; and as every arrival is greeted with a gun, the reports are more and more frequent. But though it be very true that things presented to the eyes make a more lasting impression than what is addressed to the ear, I confess I begin to get tired with staring so long at objects which, though constantly shifting, have nevertheless a great resemblance to one another. I see, too, you are beginning to yawn a little; we shall therefore, if you please, make our way back to the Priory, and return to-morrow.

To-morrow, July 30, has come; but oh how different from yesterday! It blows hard, and the appearance of the sky threatens that it will blow still harder. The gay streamers can no longer be displayed without the risk of being blown to tatters. Though the gale has increased to a storm, four yachts have started to contend for the prize, which is L.60. Observe how they yield to the sweeping blast as they swiftly scud along—they will soon be out of sight—may they all return in safety. Who could have imagined that this beautiful inland sea could be so frightfully agitated by a summer gale? But it blows so furiously, that it resembles more a wintry tempest than a breeze in the end of July. But we must not prose about it; we shall rather, if you please, go

* The celebrated natural harbour called the Cove of Cork. It is studded all round with pleasant-looking villas.

back to the starting place where we were yesterday. What clouds of dust sweep along the road! Most of the yachts are at anchor, and you observe some of the vessels are actually driving from their moorings, and running foul of each other. We have again reached the place of rendezvous, which, notwithstanding the gale, is even more crowded with carriages than it was yesterday. Here is Captain —, the preses of the club; he will tell us all about the state of matters. "Captain —, allow me to introduce to you my friend, Dr —." "I am happy to make your acquaintance, Dr —, but extremely sorry we shall be able to contribute so little to your amusement to-day. One of the yachts has just returned. She had scarcely got out of the harbour into the open sea, when one of her hands was washed overboard; fortunately, being a capital swimmer, the man was saved, though with great difficulty. The gale being on the increase, and still more violent in the offing than on shore—and, besides, observing that one of the yachts had carried away her mast, and was in imminent danger—they deemed it most prudent, as they could render her no assistance, to endeavour to return to the harbour, in order that the war-steamer, the Stromboli, might be sent to her aid. In the meantime, I have applied to the admiral on the station, who has ordered a revenue cutter to proceed without delay to the spot, and keep a watch on the missing yachts. I fear we can have no more racing to-day; but we are to have a grand dejeuner in the adjoining temporary pavilion, which has been constructed for the purpose, and where I shall be happy to have the honour of your presence."

It is now past five o'clock, the hour at which it was announced the dejeuner was to take place; and though the fate of the absent yachts is still unknown, our fasting will not contribute in the least to their safety. We may therefore join the crowd, and, before it be too late, secure comfortable places at the banqueting table. I see there are four long tables; and as Mr W— is acting as croupier at one of them, we shall endeavour to seat ourselves by him. What a crowd! There cannot be fewer than 400 persons present. Help yourself, and allow Lieutenant Levinge, who is opposite you, to attend to the ladies.

The preses has risen to propose a flowing bumper to the ladies; of course you recollect he gave "The Queen" some time ago. He has done the thing very neatly. His allusion to the commonplace theme, *leap-year*, you must admit, was well managed. He has risen again, to intimate that we must prepare to retire for the removal of the tables, in order that arrangements may be made for converting the pavilion into a ball-room.

Meanwhile, Lieutenant Levinge proposes that we should visit the Volage. The barge is in attendance, manned with a crew of twenty brave fellows. We are sure to get a ducking, as it blows harder than ever; and, moreover, there may be some difficulty in scrambling up the frigate's side. Stay you on shore, and Mr W— and I will go and report progress.

Well, you observed what difficulty we had in getting on board. Mr Levinge's hat, you saw, was blown away. When we got alongside the frigate, I confess I had some misgivings in committing myself to the precarious rope-ladder, by which alone I could ascend; but I scorned to betray symptoms of fear before men who would have pitied me as a lubber if I had shrunk from the danger, so I mounted with all the alacrity of a fearless seaman. When I got fairly on deck, what neatness, order, and cleanliness everywhere met the eye! Nothing was out of its proper place; and in five minutes I believe the frigate would have been ready for action. Before the mainmast, on a circular mahogany frame, was inscribed in golden characters the well-known signal of Nelson, "England expects that every man will do his duty!" Everything on board the Volage indicated that this noble sentiment was reduced to practice by Sir William Dickson and his brave officers and crew.

You observed the Stromboli pass while we were on board? What a magnificent steamer she is! She carries

sixty eight-pounders. Wo to the Prince de Joinville when he falls in with her as an enemy! Though, I suppose, you care as little about dancing as I do, we may just take a peep into the ball-room to admire the Irish beauties and observe their style of dancing. I am sure you will admit that here there are many lovely and beautiful women, and that not a few of them dance with elegance and grace.

It is now ten o'clock, and as you have no intention of dancing, we may as well be off.

Next day I learned, that on the accident occurring to the yacht which was dismasted the day before (and which proved to be the Union of Cork), one of her competitors, the Edith of Liverpool, gallantly relinquishing the cause of honour for that of humanity, bore down upon her distressed rival, and succeeded in towing her into Ballycotton Bay, from which she was afterwards dragged by the Stromboli into the Cove of Cork. The other yacht, the only one which sailed the prescribed course, returned at half-past eight the preceding evening, and therefore won the race.

JOTTINGS OF THE COLONIES.

ADELAIDE, SOUTH AUSTRALIA.

We have received a six months' file of a new newspaper, entitled the *Adelaide Observer*, which was started on the 1st of July 1843. If the flourishing state of a colony may be judged of from the number of newspapers it supports, South Australia must be considered in a state of prosperity, for in Adelaide alone four weekly papers are issued. The new candidate for the favour of the colonial public is well printed, and edited with skill and care. From it we are enabled to glean a few facts, which will show the state of the colony up to the end of last year.

The country appears to be struggling out of a panic brought about by large and not very prudent land speculations into which several of the colonists had plunged. But affairs seem to be assuming a healthy tone, and the province is in a state of progression towards prosperity, which is testified by the following facts:—The population of the Adelaide province has already reached 16,000, of whom 4,300 are tillers of the soil. One thousand children were born in the colony during 1843. In 1840 only 2505 acres of land had been broken up, whereas, by the end of last year, 30,000 acres were brought under cultivation. A glance at the accounts officially rendered of exports and imports, gives additional evidence of gradual prosperity. We must premise, that it is a good sign in a recently established settlement when imports decrease and exports augment in value; that is to say, till they reach the point at which commercial interchange becomes healthy. It shows that the resources of the country are being duly developed, and that the settlers obtain that on the spot which they were at first obliged to derive from abroad. This is the case as regards the Adelaide province of South Australia. On examining the official statistics published in the local gazette, on the 21st December 1843, we find the imports of the last three quarters of the year 1841 amounted in value to L.229,925 against L.74,195 of exports variously produced; whilst the importations of 1843 have not exceeded L.93,148 against L.62,645 of exports, chiefly of colonial production. The tables relating to grain, flour, rice, and potatoes, show that the imports of those articles were upwards of L.50,000 more during the first three quarters of 1841 than those for the whole of 1843, which were only of the value of L.3,500. This must not, however, be received as a sign of prosperity, for the colony seems to be getting into a state of over-productiveness, especially in the article of wheat. One or two paragraphs from the *Adelaide Observer* prove this fact. At the beginning of the harvest, vast quantities of the last year's corn were not thrashed out, and yet a new and heavy crop had

to be got in. On one occasion a dray-load of excellent wheat was hawked through Adelaide for sale, among the merchants or millers, unsuccessfully; though it ultimately found a customer at two-and-sixpence per bushel. On the same day a load of the best wheat was sold to a baker for three shillings a bushel. In another paper we find an account of a farmer who threw down his fences and allowed his cattle to eat the corn standing, in despair of finding a market for it. We may remark in passing, that in October 1843, while this cheap sale and unavoidable waste of corn were going on at the antipodes, the average price of wheat in England was 51s. per quarter, or 6s. 4½d. per bushel, and thousands were suffering for the want of bread. The wheat crops in the province are remarkably fine; instances being recorded of their yielding 45 bushels to the acre; the straw standing nine feet high.

Of stock, sheep seem to be the most profitable and largely bred, despite a disease (scabies) which prevails amongst them. Several intelligent colonists formed themselves into a committee to inquire into the best means of preventing and curing this scourge, but without eliciting anything more than is known on the subject in the parent country.

Besides its natural productions, Adelaide has set up manufactories of its own. In 1839 the only exports from the colony were wool, oil, and whalebone; in 1843 it was able to send away a variety of useful articles, after having supplied itself for home consumption with every sort of implements of husbandry. An important drawback to manufacturing on an extensive scale is a want of coal. No coal-fields have as yet been discovered in the province; a deficiency which, amongst other disadvantages, forbids the use of steamboats; but it is proposed to import this necessary article from New Zealand. Neither is water very plentiful in many districts. The town of Adelaide is near a shallow river (the Torrens), and seems as yet to be ill supplied with water, if we may judge from some squabbling among the water-carriers which appears in print. Iron abunds, and good pig iron has been made by the use of charcoal.

In looking over a list of wages published in the Adelaide Observer in 1843, we cannot perceive any encouragement for artisans to emigrate to that colony. Wages are about the same, or perhaps a little less than in Great Britain. The average earnings of a journeyman blacksmith is 30s. per week: 'trade middling.' Sawyers—who are rather scarce—carpenters, painters, shoemakers, tanners, miners (chiefly employed in digging wells), and shipwrights, about the same. Bricklayers, tailors, and wheelwrights, earn only 25s. per week. Agricultural labourers and domestic servants, on the contrary, being in demand, are better paid than in this country. Farm labourers easily obtain employment at 8s. per week, and their food. Shepherds '8s. to 13s. per week, according to ability, together with rations, consisting of 10 pounds of flour, 10 pounds of meat, 2 pounds of sugar, and ½ pound of tea, weekly. Where wives act as housekeepers, they obtain rations also. At distant stations higher wages are given.' Adelaide holds out the best prospects to domestic servants. Men in that capacity, and female cooks, obtain from L.20 to L.25 per annum, besides their board; house and nursemaids from L.10 to L.12.

From the advertisements (of which the paper we are quoting has upon an average four well-filled columns), it would appear that the town of Adelaide is provided with shops and stores containing every necessary of life it is possible to wish for, together with a few luxuries. Nor are the intellectual wants of the colonists neglected. A bookseller is frequently announcing the arrival of shipments of books in every department of literature, and boasts that his circulating library contains 2500 popular novels, romances, and periodicals. He promises, moreover, to increase his catalogue by every arrival from England. Another in 'the trade' advertises a 'variety of new and popular works, suitable for *busk reading* and private families.' Thus the fame

of an English author sometimes extends, it would appear, to the dense solitudes of an Australian forest. But the colony does not depend entirely on the mother-country for intellectual nutriment: it publishes books of its own. There is a native 'South Australian Almanac' issued annually; and under the head 'just published,' we find the announcement of 'The South Australian Vigneron and Gardeners' Manual,' written by an emigrant gardener, and printed and published at an Adelaide newspaper office.

Not the least interesting information we have picked out of the Adelaide Observer, is that concerning a colony of Germans in the Mount Barker district, some twenty miles east of the town of Adelaide. By the 5th Victoria, natives of Germany residing in South Australia are made British subjects; to all of whose rights and privileges they are admitted. Hahndorf, or German town, and a neighbouring village which they have established, though not situated near the best land in the colony, is flourishing under their persevering industry. Hahndorf already boasts of a Lutheran church, a mill, an inn, and schools, at which forty-eight daily, and between fifty and sixty Sunday scholars attend. 'The men tan their own leather, and the women card and spin wool, and knit stockings; and in order that no opportunity may be neglected of improving their time and their circumstances, those of the able-bodied among them, who can be spared from home, find employment with the neighbouring farmers and settlers in the capacity of shepherds, labourers, or servants.' These people may be safely set up as models for emigrants. They would 'get on' anywhere. The township of Mount Barker is the 'county town' of the district, and is inhabited by Germans and English. It already boasts of a court-house, where magistrates sit weekly, a police station, a post-office, a school-house, and an inn.

Taking into consideration all the facts we have been enabled to gather from the current information, supplied by the Adelaide Observer, it is to be inferred that the colony is in an improving and satisfactory condition.

PERIODICITY OF VITAL PHENOMENA.

DR LAYCOCK, physician to the York Dispensary, and Messrs Quetelet, Schwann, and Schweig, the well-known continental philosophers, have of late years been gradually bringing to completion a curious theory with regard to the periodicity, or tendency to a regular recurrence, of certain vital phenomena in connexion with periodical phenomena in the external world. From a short view of the doctrine, which we find in the July number of the British and Foreign Medical Review, it appears that the fundamental period of these philosophers is twelve hours. They find the barometer comes to its minimum height for the day between four and five in the morning, and once more between four and five in the evening. Again, it is at its maximum height twice in the twenty-four hours, namely, between eight and ten in the morning, and between eight and ten in the evening. The two first of these periods are also the times when electric tension is at its minimum; while at the two latter periods it is at its maximum. Now, it is very remarkable that these periods also mark the occurrence of certain organic phenomena, such as the beginning and conclusion of the exacerbation of fevers, the beginning and conclusion of excitement in the insane, the greatest excitability in the circulation, and the escape of insects from the chrysalis. Our philosophers therefore assume that twelve hours is a space of time or period fundamentally concerned in vital phenomena. They call it the lunar day, which they hold the *basic unit* of their system. An ordinary or solar day they consider, accordingly, as two days, and an ordinary week as two weeks.

'This hebdomadal or heptal cycle, according to Dr Laycock's views, governs, either in its multiple or sub-multiple, an immense number of phenomena in animal

life. The phases of development in insects appear to present the most uniform examples of its influence. In these Dr Laycock makes four principal periods; 1. the hatching of the ova, &c. The ova are hatched in periods varying considerably as to length. The shortest is a lunar week, or three days and a half, as in the wasp, common bee, and ichneumon; in the cecidomia tritici, it is two lunar weeks; in the black caterpillar and gooseberry grub, three lunar weeks. The larva state rarely occupies less than two, or more than twenty-four lunar weeks, and the moults of that state have usually an interval of two lunar weeks. "The period spent in the pupa state is the most in accordance with the general law of limitation by weeks; in fact, the more exact the observations are as to the length of this period, the more confirmatory are they of the general rule: for example, Mr Denny had three larvæ of the *sphinx atropis*, which went into the earth on August 22d, 24th, and September 2d, respectively. They appeared as perfect moths on October 16th, 18th, and 27th; or, in each case, in exactly eight weeks."

"A peculiar class of the functions of the adult insect or imago exhibit the agency of the same law. Thus twenty or twenty-one days after the queen-bee has begun to lay the eggs of drones, the bees begin to construct royal cells. If her impregnation be retarded beyond the twenty-first (Huber) or the twenty-eighth (Kirby and Spence) of her whole existence, she lays male eggs only, showing then no jealousy of the young queens. Some insects attain puberty immediately after leaving the puparium; others occupy a definite number of weeks in growing, especially the coleoptera, arachnida, and crustacea. Thus the newly-disclosed imago of the *colonia aurata* remains a fortnight under the earth, and that of the *lucanus cervus* not less than three weeks. The common cyclops is at first nearly spherical, and provided with no more than two antennæ and four short feet. On the fourteenth day a small projection appears on the hinder part of the body; on the twenty-second it acquires a third pair of extremities; and on the twenty-eighth it moults."

"The periods of incubation or of development of the ova of fishes have not been closely observed, with the single exception of those of the salmon. From Dr Knox's industrious zeal, we learn that the ova of that fish are hatched in exactly twenty weeks, or 140 days. These periods in birds are much better known to us; they are all regulated by this "heptal" law. The eggs of small birds, as fly-catchers, sparrows, &c. are hatched in two weeks; of gallinaceous birds, the common fowl, pheasant, grouse, &c. in three weeks; of the duck tribe, in four weeks; of swans, in six weeks.*

The higher tribes of animals are shown to be under the same law in respect of their periods of gestation. 'It is not, however, the phases of development only that exhibit the law of periodicity just laid down; there are various other changes and functions amenable to it. The moults of adult annulose animals, as the arachnida, myriapoda, and crustacea, the exuviation of serpents, and the renewal of the dermoid appendages in birds and mammals, are all regulated by it more or less. And so also are minor processes. The ring-pigeon not only sits fourteen days, but lays eggs previously to sitting for fourteen days. Birds of the goose and duck kind lay eggs in the wild state at tertian intervals [the basic unit quadrupled], that is to say, seven in fourteen days, or one every other day. The goldfinch builds its nest in three days, and it is left unoccupied for four, the first egg not being laid until the seventh day from the beginning.'

Dr Laycock has some laborious investigations of the periods of intermittent disease, which go upon the whole to support his theory. He adopts the hypothesis of a regular sequence of critical days in health, going continually on from the beginning of organic existence, and predisposing to the outbreak of disease. It is par-

ticularly marked in the stages of the development and shedding of the teeth. In support of this idea, he instances the case of twin brothers, sick-nurses in an hospital at Bourdeaux, who were always ill at the same time, and became affected with cataract together. We can add, from our own observation, another case of twins, identical in appearance, who frequently have coincident ailments, and who even lost, in two or three instances, during dentition, the same particular teeth in succession.

It appears that the number 7 is deeply concerned in this curious hypothesis. This leads Dr Laycock into a dissertation, too abstract for our readers, on the importance attached in ancient and modern times to that number, and on its remarkable properties in transcendental arithmetic. We may only remark, that 7 has been long known to be distinguished in the laws regulating the harmonious perception of colours and sounds; it is so in that of forms also, and probably even in tastes, if we may believe the works of our ingenious townsman Mr Hay. 'There is harmony of numbers in all nature; in the force of gravity, in the planetary movements, in the laws of heat, light, electricity, and chemical affinity, in the forms of animals and plants, in the perceptions of the mind. The direction indeed of modern natural and physical science is towards a generalisation which shall express the fundamental laws of all by one simple numerical ratio.' Probably it will soon show 'that the mysticism of Pythagoras was mystical only to the unlettered, and that it was a system of philosophy founded on the then existing mathematics, which latter seem to have comprised more of the philosophy of numbers than our present.'

ETCHINGS FROM ORDINARY LIFE

THE CONTRAST.

ROBERT MATHEWS, or, as he in the meridian of his fashionable life used to write himself, Robert Mowbray Mathews, was the only son of an honest hair-dresser who commenced business in the thriving seaport of K—, when hair-dressing was a very different sort of affair from what it has been since the abandonment of pigtailed and powder. John Mathews was an agreeable old man, fond of joke and banter, but possessed withal of a degree of quiet worldly wisdom, which gained for him in his native burgh the nickname of Pawky John. Nobody's shop could be more tidily kept or more neatly painted than his; the floor was so thoroughly scrubbed, that it almost vied in whiteness with his linen apron; and the pleasant odours which escaped when his sash was open, were enough to keep one on that side the pavement though his business lay directly over the way. In fine, about the beginning of the present century, Mr Mathews's was the beau-ideal of a provincial hair-dresser's shop, aspiring to do a little in perfumery, and a great deal in the toy trade, if one might judge from the display of drums, trumpets, tin swords, and pea-guns which adorned its windows. The truth is, its owner was a thriving man: no one could be more obliging to his customers than he, and no man truer to his profession, if we except a few errant bursts of patriotism which led him on sundry occasions to don the martial habiliments of a volunteer. Possessed by inheritance of the house and shop in which he practised his art, having a frugal and industrious partner, and blessed with no more than two children, the demands upon his income were not numerous, and by the time that his eldest child and only son was fit to become an apprentice, John Mathews had managed to lay aside somewhat more than three hundred pounds. About this period Waterloo gave a quietus to 'the war,' as it did to our hair-dresser's patriotism; and henceforth he, his wife, son, and daughter, were all working-bees in that shining little shop of his. There was always something for each to do, and as the family expenditure was small, John's capital accumulated more rapidly

* British and Foreign Medical Review, xviii. 107.

than could be expected by those who have never attempted a similar experiment. No person, however, would have known that fact from his bearing: he was ever the same cheerful, modest, little man, with a bit of pleasantry for all, and a willing and ready hand to whisk off the roughest beard in the seaport.

Time went on. John Mathews made money, bought house-property, and acquired a status in the burgh. And now that this fact became known, he was treated with somewhat greater deference. Mr was heard more frequently than John; he was sundry times elevated to the council-board; and on one occasion, if his modesty had permitted, would have been honoured as bailie. All this, however, wrought no change on our hair-dresser. No doubt the frontage of the old shop was remodeled, and a more commodious house fitted up above, with other similar improvements; but this was no more than befitted the condition of a man at the head of his profession in the bustling little seaport of K—. Well would it have been had this prosperity affected the son as little as it did the father. Robert, now a young man, had very different ideas of hair-dressing and the world: he hated the one, and looked upon the other as a field only for 'genteel and fashionable' amusements. Many and long were the altercations on this point between father and son; but the old man had his hand at the helm, and took his own circumspect and industrious course. 'No, no, Bobbie, my man, stick to your trade; and if ye dinna dishonour it, it'll no dishonour you. What though you were a merchant, or a writer, or a doctor to-morrow, ye would still hae to work—ay, a great deal closer than ye do now, and maybe at dirtier work than ye meet wi' in your father's cutting-rooms. No, no, lad, folks that set up to be gentlemen a' at ance, would need to hae lang purses, or gudsooth their horses and gies 'll no stay lang wi' them. Wait till we double what we hae, and ye catch some brow leddy, and then we'll talk o' *Mathewsville* and our crops; but just now, let's crop the chins and pows o' our customers.' Thus would he endeavour to reason the young man out of his folly, which had already become painfully apparent in his perpetual anxiety to be mistaken by the public for a gentleman, and in the horror he felt at being recognised as in anyway connected with the craft of his worthy father. 'Had I been a lawyer or a merchant, or anything but a hair-dresser,' he would say, 'I might have associated with other folks, might have dined on the Sundays with Farmer Graham, kept a couple of pointers, and taken the license to shoot over young Newlands's moors; but the connexion with that—toy-shop—faugh!' Thus did Robert Mathews, like many other foolish fellows, fret himself out of humour with his profession, get idle, and associate with certain young men, whose chief glory it was to sneer at humble pursuits, and to ape the vices but not the virtues of their superiors. To preserve an only son from ruin among such associates, as well as to gratify his desire of being in some other business on his own account, his father at length consented to advance the capital necessary to set him up as what is in Scotland called a 'general merchant.' It was indispensable, however, to have some knowledge of business; at least so thought the father; and the capital was to be forthcoming only on condition of the son's attending for twelve months the warehouse of a neighbouring trader. To this the young man reluctantly yielded; he saw nothing in a general merchant's business which his father's shop had not fitted him for; besides, it was a year lost, allowing some other person to get the start, and the chance of turning over a few hundred pounds' profit gone. The consequence was, that before six months were over, his inattention and presumption had become so annoying, that his master was glad to get rid of him.

He was now ready to commence business; but where? His native burgh was out of the question: in any part of its best street he was within sight of the painted pole of his father; and for a 'general merchant' to hold up his head under the pole of a barber, was impossible.

The town of D— was accordingly chosen, not precisely because it offered the most advantageous opening, but that it was where one of his former associates had recently opened as haberdasher, and because the moors of his gentleman acquaintance, Newlands, lay within a comfortable dinner drive. Here 'Mr Robert Mowbray Mathews, merchant,' rented a large shop, fitted up a house by one half too expensive for his station, and commenced business on a great scale—all upon a cash account of one thousand pounds from his father, and the credit which that worthy man's good name inspired among the wholesale traders. For the first six or eight months the novelty of the change was quite exhilarating: our young shopkeeper really did wonders; for, with all his folly, he had a strong liking for money, which he found was indispensable to his extravagances. But then, having established his business, the business, if worth keeping, must take care of itself. Such was the sage maxim of Robert Mowbray Mathews; and now he recommenced his career of gay and fashionable aspirations. A young man of twenty-six, at the head of a first-rate retail trade, could surely afford to have a horse and gig, take a game license, and keep a couple of pointers. There was no harm in all this: his profits could afford it; his 'young men' could manage the shop; and, with a little supervision on his part, affairs would get forward quite swimmingly. Fagging day after day would never do with his constitution; and if he had only a few years of this over, what with his own and the old man's capital, he would settle down in some snug little country estate, marry an heiress, and then—hurra for it! Thus did he reason with himself; and, suiting the action to the word, would wave his quill in ecstasy, and kick the counting-room stool under the desk for the evening. Happy Mr Mathews!

Robert's first year as merchant passed by without anything particular to attract the attention of his father or friends. His accounts were duly paid; and if he could not say as much for his own customers, it was that, being a beginner, it would not do to be over-harsh in demanding punctual payments. The second year came round; he saw less of his shop, and more of a few loungers who were connoisseurs of wines, and talked knowingly of horses and dogs. To be the associate of such men, was more than fortunate in the son of a hair-dresser. It cost him, to be sure, some of the most expensive dinners; but what of that? He was only doing what other gentlemen did; and then did not he reap the pleasure of his own horses and dogs, which, without such society, it would be ridiculous in him to aspire to? Thus, amid jockeys, dog-fanciers, fashionable idlers, and dissipated lairdlings, did Mr Mathews neglect his business, and squander double what he could earn by it, even if it had been attended to—a thing it was not—for his shopmen followed in their own way the example he set them, and spent in vicious enjoyments much of the profits of their employer. The close of the second year came round; bills became due: every shift was tried to meet them; customers were dunned for their accounts; and at last old Mathews was appealed to. Much, however, to the credit of his good sense, he firmly resisted; and thus his son was left to his own shifts and resources. Somehow or other he scrambled through this his first business-difficulty, and might have recovered himself had he abandoned his sporting and dissipated companions: but no; he wanted nerve for that, and knew too little of mercantile affairs, to conduct them with profit against such expensive demands. His customers whom he had dunned now fell off, his creditors became duns in turn, and refused new stock till the former supplies were accounted for. Against such a concatenation of difficulties scarcely any experienced merchant could hold up, far less Mr Robert Mathews, who knew less of merchandise than his youngest apprentice. His gay companions could do nothing for him; for they were equally penniless with himself, and only hung about him so long as he could

minister to their pleasures. In a few months more his name figured in the Gazette; his shop and goods were disposed of for behoof of his creditors; and he, poor fellow, was under the necessity of taking shelter under the old painted pole which he had so cordially despised. Doubtless, had he possessed any manly spirit—but when did such as he ever boast true pride?—he could not have submitted to this humiliation. He attributed his misfortunes to other people—to his customers, to his shopmen, to the dull times; in fine, to everything but the right cause—his own extravagant expenditure, want of steady purpose, and the necessary knowledge of, and attention to, his business.

Old John Mathews was now a humbled and much altered man. Reflections upon his lost thousand pounds, and the disgrace of his son's bankruptcy, preyed sorely upon him; and it required all the cheering influence of his wife and daughter to keep him from sinking under it. 'However, the laddie's wi' me,' he would say; 'and if he sees the folly o' his ways, and resolves to do better, the experience is cheaply bought, dear as it has been to me.' In life, Robert was now little better than a cipher: his former comrades only laughed among themselves at his silliness; and finding himself no longer in request among them, he was fain to sit quietly down in his father's shop, which was by this time of considerable value. What his employment was, no one ever rightly could learn, for he seldom or never made his appearance before customers; but there are many things which can be done in a peruke-maker's back-room, and amid these varieties we believe Robert was profitably employed. While his son had been squandering, the old man had been storing. The returns from his business were considerable, and by one or two lucky appliances of his capital, he had more than doubled it. The reader must not imagine, however, that John Mathews was a speculator. He was too cautious for that, especially in matters which he knew nothing of, and yet it was by speculation that he doubled his savings. A shipowner, skilled in the whale trade, saw how he could readily make his fortune, had he only the command of a certain sum; but to ask this publicly, was to let his secret out, and therefore he had recourse to Mr Mathews. 'I'll no join you,' said John, 'for I ken naething about whaals or Greenland; but I'll tell ye what I'll do. If the spec's sae gude as ye say, gie me security over your insurance, and I'll lend you the two-three bawbees I hae managed to scrape tgether. If ye lose, I'll seek nae interest, and if ye succeed, ye'll surely share the profits.' The captain saw no other way of raising the money, and hard as was the bargain which old Mathews drove, it was agreed to. The speculation was tried, and proved doubly successful. John was now, comparatively speaking, a rich man; but still he venerated the painted pole and his toy-shop, and would not have parted with his business (which, by the way, fully employed a journeyman and couple of apprentices) for ten times his capital. What the amount of that was, no man, and far less woman, knew. 'Is it three thousand?' says Mrs Mathews in the most winning tone she could utter, one evening when John was in an unusual sunshiny mood. 'Na,' says his daughter, striking the key a little higher, and more directly to the old man's pride—'it's four.' 'It's neither,' replied John, imitating the tone of his daughter; 'but when ye get a man wi' the half o't, I'll tell ye what I'll do—I'll double his fortune.' The old man, however, never lived to fulfil this pleasant promise; for, in a few months after, and just as he was meditating retirement from business in behalf of his son, he was suddenly cut off, leaving his effects to his children after the decease of the mother. Nor was this event long in following. Within less than a year the grave also closed over Mrs Mathews, leaving Robert inheritance to the value of three thousand, and his sister to the value of two thousand pounds.

Now was the heyday of Mr Robert Mathews's wishes. Grief for his parents soon subsided; his old companions began to recognise him; his former habits returned; and

a few months saw the old hair-dresser's shop, and every trace of it, obliterated. His mind was irrevocably fixed upon a small moorland estate adjoining that of his friend Newlands, which he was to improve and farm on his own account, and for the purchase of which it was resolved to sell off all the property which his father had acquired in the burgh of K—. His sister, a facile and somewhat vain woman, readily consented to all this, her concurrence being the more easily obtained, that one of her brother's 'gentlemen' companions was soliciting her hand. Still, all the money they could muster was not sufficient to purchase and stock this hill-farm; but that was easily managed by the lawyers—a mortgage concluded the bargain. R. M. Mathews, Esq. of Broadmoor, was now in his own eyes a most important person. The very mention of hair-dressing or perukes put him in a fever; he would, indeed, have given half his fortune had such distressing vocables never been invented. He scorned the idea of his father's journeyman succeeding to the business, even though handsomely offered for the good-will thereof, lest it should perpetuate the remembrance of his origin. Nay, he even went so far as to make it a question in law whether that individual should state in his handbills 'fifteen years journeyman with the late Mr Mathews.' The journeyman, however, kept to his resolution, and now makes almost as good a living under the painted pole as did his respected master and preceptor.

How Mr Mathews of Broadmoor conducted the affairs of his estate is easily told. A mansion was built, quite unsuitable to the extent of his land; hunters and dogs were of course indispensable; and as these luxuries necessarily involved the keeping of company, company was kept of the most expensive description. The companionship of quiet decent farmers was what Mr Mathews could not of course condescend to; and country gentlemen of standing and respectability treated him with the same indifference. In short, his associates were of the most objectionable sort: those of a higher rank, who, despised and excluded by their own circle, sank down to his only for the sake of his wines and the social liberties allowed them. Ignorant of farming and its details as if he had come from a different planet, he had to depend entirely upon the advice of others; and they not knowing, or not caring to know, the condition of his land, gave admonitions often the most contradictory and perplexing. Thus it was that in less than two years he found himself in pecuniary difficulties, and had to raise money by mortgage. To increase his difficulties, his sister married one of his gay companions—the penniless youngest son of a neighbouring family; called up her portion, and departed with her husband for New South Wales. Thus additional mortgages were thrown on Broadmoor; and Mr Mathews, relaxing nothing in his expensive habits, and learning nothing of his business as gentleman-farmer, but getting into debts through racing and other extravagances, was, in the course of eight years, compelled to submit to a sale of his estate.

When his debts were cleared off, he found himself worth somewhat less than six hundred pounds. With this sum he might have succeeded as a farmer. Thousands have built fortunes on less; but farming and a country life were now to him as nauseous as mercantile pursuits. He embarked the remnant of his fortune in some maritime speculations, in partnership with another equally unsettled as himself. Handsome fortunes had recently been made in this line, and what should hinder Robert Mowbray Mathews and his partner from doing what others had done before them? So thought our quondam laird, and so he had always thought at each new turn of his career, till misfortune and failure had taught him the contrary. For a few years, he was seen about town endeavouring to look something like business, but the guise was too flimsy to hide the fact from those who knew him. He was an idle and profligate man. Suddenly he was missed from his accustomed resorts; he had fallen in debt, and fled no one knew whither. Years passed by, and Robert Mathews was found in company

with his former partner as a petty coal-broker in the Scotch metropolis. This, too, like all his other schemes, failed him, or was abandoned for something new; for the last time we happened to observe him, was during the present autumn, in the habiliments of a broken-down jockey, attached to the steps of a public omnibus.

Wyse men alway
Affirme and say,
That best is for a man
Diligently
For to apply
The business that he can;
And in no wyse
To enterpryse
Another faculté;
For he that will,
And can no skyll,
Is never like to the [to thrive].

So saith Sir Thomas More in his 'Merrie jest how a sergeant would learn to play the ffrere' and there is a world of sound practical sense in the observation. Had Robert Mathews adhered to his original profession cheerfully and diligently as his father had done, he might in due time have become the country gentleman he so much desired to be. He might have bought his estate, and lived in a quiet and comfortable way on his interests and rentals. Even had he wisely laid out the inheritance his father left him, he might have passed his days in quiet competence; but his ambition and vanity would not rest. For the time being, no pursuit was so contemptible and unprofitable as that which he had attempted, and failed in; none possessed of so many golden attractions as those untried. Thus it was he followed from one profession to another, disappointed when he found that it required diligence and attention to master its details, and disgusted when he had not the patience to bestow that attention and study which alone secure success. Such has been the fatuous career of Robert Mowbray Mathews. And now that tattered figure, with blotched countenance, and eye that seldom meets the public gaze, that shrunken frame and paralysed step which is tottering towards the refuge for the houseless, is the melancholy result.

CARE AND CONDENSATION IN WRITING.

THERE are some writers who seem to regard mere quickness and facility of production as of more importance than the quality of the thing produced. They insult the public with a flippant boast of the little time which they have thought it necessary to bestow upon a work intended for its acceptance, and make that a subject of triumph which calls for an apology. If the public were in a state of intellectual deprivation, and were too voracious to be nice, these rapid writers might be looked upon as benefactors; but the case is precisely the reverse; the world abounds in books, both good and bad. There is, at all events, no demand for a greater number of the latter kind. We can afford to wait for the result of an author's best exertions, and are not obliged to accept with gratitude the first crude and hurried productions that he is disposed to offer.* It is not the task of a day for a man to enter into competition with such writers as Shakespeare and Milton, or Byron and Wordsworth, or to produce a work of whatever kind, which the world would not willingly let die. A reader is as little curious about the number of hours which a poet may have taken to write his verses, as about the number of arms or legs of his study chair. The question is, whether the verses are good or bad, and not how, when, or where they were composed.

Anna Seward had the impudence to talk of translating an Ode of Horace while dressing her hair. If her translations had been worth a straw, we should have been surprised at her facility; but their real value

would have received no additional charm from the mode in which they were produced. On the contrary, we should have had reason to be dissatisfied with them, however good, when we came to consider how much better they might have been made if the author had been less presumptuous and more careful. Her affectation of facility was disrespectful both to Horace and to the public, and her indecent haste or negligence was in direct defiance of the advice of Horace himself. Extreme facility is, generally speaking, an unfavourable indication of the character of an author's mind. Rapid writers, like rapid talkers, are far more frequently shallow than profound. It has been very justly observed, that nothing is such an obstacle to the production of excellence as the power of producing what is pretty good with ease and rapidity.

Rousseau has described 'the ceaseless inquietude' with which he attained the magic and beauty of his style. 'His existing manuscripts,' says D'Israeli, 'display more erasures than Pope's, and show his eagerness to set down his first thoughts, and his art to raise them to the impassioned style of his imagination.'* Dr Johnson has told us of the 'blotted manuscripts of Milton,' and has shown the painful care and fastidiousness of Pope (to which D'Israeli alludes) by the publication of some of the corrected proofs of the translation of Homer. Ugo Foscolo, in his elegant Essay on Petrarch, informs us that if the 'manuscripts did not still exist, it would be impossible to imagine or believe the unwearied pains this poet has bestowed on the correction of his verses.' 'They are curious monuments,' he adds, 'although they afford little aid in exploring by what secret workings the long and laborious meditation of Petrarch has spread over his poetry all the natural charms of sudden and irresistible inspiration.' It is said of the celebrated Bembo that he had a desk with forty divisions, through which each of his sonnets was passed in due succession, at fixed intervals of time, and that at every change of place it received a fresh revision. Joseph Warton, in his Essay on Pope, quotes the assertion of Fenton, that Waller passed the greatest part of a summer in composing a poem of ten stanzas. 'So that,' adds Fenton, 'however he is generally reputed the parent of those swarms of insect wits who affect to be thought easy writers, it is evident that he bestowed much time and care on his poems before he ventured them out of his hands.' Warton also mentions, in further illustration of his subject, that it is well known that the writings of Voiture, of Sarassin, and La Fontaine, cost them much pains, and were laboured into that facility for which they are so famous with repeated alterations and many erasures. Moliere is reported to have passed whole days in fixing upon a proper epithet or rhyme, although his verses have the flow and freedom of conversation. Some of Rochefoucault's maxims received twenty or thirty revisions, and the author eagerly sought the advice of his friends. Buffon called genius patience.

It is said that Shakespeare never blotted a line. To this we may reply with Ben Jonson, would that he had blotted a thousand! The errors and imperfections that are discoverable even in his wondrous pages, are spots on the sun that we often have occasion to wish away. Foreigners constantly throw these defects in the teeth of his national admirers. But Pope, in his Preface to Shakespeare, has shown that the great bard did not always disdain the task of correction, though he sometimes neglected it. The *Merry Wives of Windsor* and the tragedy of *Hamlet* were almost entirely re-written.

* 'E'en copious Dryden wanted, or forgot,
The last and greatest art—the art to blot.'

Dryden sometimes, however, corrected his pieces very carefully, when he was not writing hurriedly for bread.

* I hate all those nonsensical stories about Lope de Vega and his writing a play in a morning before breakfast. He had time enough to do it after.—*Hazlitt*.

* My manuscripts, blotted, scratched, interlined, and scarcely legible, attest the trouble they cost me; nor is there one of them but I have been obliged to transcribe four or five times before it went to press.—*Rousseau's Confessions*.

He spent a fortnight in composing and correcting the *Ode on St Cecilia's Day*. But what is this, exclaims Dr Johnson, to the patience and diligence of Boileau, whose *Equivoque*, a poem of only three hundred and forty-six lines, took from his life eleven months to write it, and three years to revise it? Ten years elapsed between the first brief sketch of Goldsmith's *Traveller* and its publication, during which it was nearly rewritten two or three times. In his first copy of *The Deserted Village*, the lines were written very wide apart, to give room for alterations; and we are told by Bishop Percy that scarcely a single line in any of Goldsmith's poetical works remained as it was originally written.

The Memoir of Gibbon was composed nine times, and some of Pascal's works were corrected and re-written just as frequently. Addison would stop the press when almost a whole impression of the *Spectator* was worked off, to insert a new preposition or conjunction. Dr Johnson is said to have corrected and improved every new edition of his *Rambler*. Akenside so altered and corrected the *Pleasures of Imagination*, and yet so little satisfied his own judgment, that, after it had passed through several editions, he found it better to re-write it altogether. He did not live to finish the new version, but two or three books or sections of it are now usually included in his works. It is curious to observe his fastidious alterations. His spirited *Epistle to Curio* was first published in heroic couplets, and afterwards turned into an ode in ten-line stanzas. It is true that these two great changes were by no means improvements, but they prove that Akenside was not one of those who think labour needless in a man of genius. He urged this principle, however, too far. He delayed the correction of the warm effusions of his youth until old age had chilled his imagination. This was a sad mistake. But whatever may be the disadvantages of over-labour and too great fastidiousness, they are far less dangerous than errors of an opposite character. I believe no one has seriously recommended haste and negligence of composition. The best critics, on the contrary, have urged the necessity of assiduous care. It is remarkable that some of our most voluminous writers have confessed the great toil and attention which they bestowed upon their works. Cowper, a vigorous, and by some thought a careless poet, in one of his delightful letters observes, that 'to touch and retouch is, though some writers boast of negligence, and others would be ashamed to show their foul copies, the secret of almost all good writing, especially in verse.' He adds, 'I am never weary of it myself.' Moore, whose own poetry, glowing as it is, bears internal evidence of great care, assures us in his *Life of Byron*, that his lordship was no exception to the general law of nature, that imposes labour as the price of perfection. He gives several curious specimens of the noble poet's fastidious changes of phrase, and his laborious correction of defects. Medwin, in his *Life of Shelley*, published in the *Athenæum*, tells us that that poet exercised the severest self-criticism on everything he wrote, and that his manuscripts, like those of Tasso at Ferrara, were scarcely decipherable. His care, however, I should think, was bestowed more on the choice of striking and gorgeous expressions, than on that finish and condensation of style which is now so much neglected. He is too exuberant. Drummond of Hawthornden beautifully and truly says—

'I know that all the Muse's heavenly lays
With toil of spirit are so dearly bought.'

In a free translation of Boileau's *Art of Poetry*, partly by Sir William Soame, but chiefly by Dryden, authors are strongly cautioned against too much haste:—

'Take time for thinking; never work in haste;
And value not yourself for writing fast.

—Of labour not afraid;

A hundred times consider what you've said;
Polish, repolish, every colour lay,
And sometimes add, but oftener take away.'

Horace, who is thought a good authority in such mat-

ters, not only advises a poet to keep his work by him for nine years, but particularly insists on the absolute necessity of frequent correction. Beattie confesses in a letter to Sir William Forbes that he thinks it right to let his pieces lie by him for some time, because he was a much more impartial judge of such of his works as he had almost forgotten, than of such as were fresh in his memory.

This is the golden age of periodicals, and though I should be the last to dispute the numerous and great advantages of this species of publication, I confess that I think it has an injurious effect on some of the higher branches of our literature. The genius that should be devoted to works of permanent importance is now often frittered away in divided and hasty contributions to miscellanies of temporary interest. As rapidity and punctuality are great recommendations in a contributor—as the scale of remuneration is regulated more by the quantity than the quality of their articles—and as they are generally published without a genuine signature, and therefore do not involve the reputation of the writer, it is not surprising that terseness, or polish, or condensation of style is never looked for, and rarely met with, in the pages of even the most respectable of our literary periodicals. They exhibit, on the contrary, a vicious redundancy of phraseology, and a reckless disdain of all those gentler or severer charms which have cast such an air of immortality about our best English classics.

When we revert to the dignity of Milton, and the grace and amenity of Goldsmith, the manly vigour of Dryden, and the point and elegance of Pope, the weighty sententiousness of Johnson, and the purity, the refinement, and the quiet humour of Addison, we feel how much English literature has suffered by the present popular demand for a species of poetry at once metaphysical and melodramatic, and for crude, flippant, and shallow criticisms, and flashy and turgid essays. The peculiarities of one class of literature have almost always a direct or indirect effect upon all others of the same period. The rapid, inflated, and redundant prose of the present age corresponds with the similar characteristics of its poetry. Mere rapidity and voluminousness are now commonly mistaken for proofs of the power and fruitfulness of genius. When Gray first published his poems, they were so brief, and so few in number, that to give his work the appearance of a volume, he was obliged to swell it out by printing on one side only of the pages. If it had been brought into juxtaposition with the gigantic and bloated quartos of these times, it would have looked more like the ghost of a book than a genuine volume. Were a work of such Lilliputian exterior now published, the author would be laughed at for supposing that it could attract the slightest attention.

'As 'tis a greater mystery in the art
Of painting to foreshorten any part
Than draw it out, so 'tis in books the chief
Of all perfections to be plain and brief.'—Butler.

In literature, as in everything else, quality, and not quantity is the true test of excellence; and though the remark is a mere truism, it is not the less called for. There may be more wealth in a lady's jewel-box than in a merchant's warehouse, and there is more poetry and thought in five couplets of Pope than in ten cantos of Sir Richard Blackmore. Voluminous and diffuse writers are rarely the favourites of fame. The greater number of those who flourished in former times are now utterly forgotten. Posterity examines unwieldy luggage with a severe and jealous eye, and seems glad of an excuse to toss it into the waves of Lethe. The few voluminous writers whose works still exist, would have been forgotten also, had they not been as careful as they were copious. What a vast crowd of prolific scribblers have these great and happy men survived! How many thousands have been buried under the weight of their own lumber!

Against much that has been already said, it may perhaps be urged that a rich soil is characterised by a

speedy and abundant vegetation. I admit it; but this soil must be cultivated with incessant care, or it will soon be covered with a rank luxuriance of weeds and foliage. I do not maintain that quick conceptions are not a sign of genius, but that to connect glorious thoughts with words fit to enshrine and represent them, is a difficulty only to be overcome by assiduous toil and study. It is justly remarked by Shenstone, that fine writing is the result of spontaneous thoughts and laboured composition. Burns has acknowledged that though his ideas were easy and rapid, the necessary correction of his verses was a heavy task. The great Milton well knew the advantage of condensation, and after dictating about forty lines, would reduce them to half that number. It was the custom of Virgil 'to pour out his verses in the morning, and pass the day in retrenching exuberances and correcting inaccuracies.' A French author happily illustrated the comparative facility of a diffuse style, when he apologised for the length of a letter by stating that he had not time to write a shorter one.

The writers of the present day, both in prose and verse, possess perhaps, taken as a body, more energy of thought and passion, and more of the genuine spirit of inspiration, than their predecessors in the time of Queen Anne; and if they were only half as careful and condensed, their great superiority would be evident. But too many of them are prodigal of their intellectual wealth, and waste their powers.*

THRIFT, OR NOTHING IS USELESS.

FROM THE GERMAN OF ZSCHOKKE.

JOHN SCHMID was an old soldier with a wooden leg: he was so poor, that for some years he was obliged to solicit alms from door to door in the villages near to that in which he lived, which was situated on the lake of Constance. Now, however, old John Schmid sits at his ease in his arm-chair; he is in independent circumstances; yet few people guess how he came by his wealth. One affirms that he discovered a secret treasure; others have gone so far as to hint that he made a compact with the Evil One. When such hints are dropped in my presence, I fail not to reprove the speakers. I know better the means by which the old soldier got rich, and I will tell you how it was.

John Schmid had three sons, whom he had brought up well in spite of his poverty; for he not only furnished them with good advice, but with a good example, and suffered many privations that he might send them to school. One morning in spring, as the old man was dividing amongst them the bread which was to break their fast, he said, 'My children, you are now old enough to gain your own livelihood; but you must not beg while there are other means of obtaining it—that would be taking bread out of the mouths of those who may want it more than you. Pierre,' he continued, turning to the eldest, 'you are fourteen years old, and have sharp eyes—use them to seek employment. You, Gabriel, though a year younger, have strong arms—set them to work. You, George, though only eleven, have stout legs—profit by them.'

'But what,' exclaimed the three boys at once, 'would you have us to do?'

John Schmid answered, 'I know that you have neither land to cultivate, wood to fell, nor flocks to tend; but there are many things that are thrown away as useless, but which with a little industry may be collected and made profitable. By and by I will show you how. Do not spend the money which you will earn in obedience to your wants, but economise it for the neces-

sities of the future, be it ever so little. Could you save only a batz a-day, each would amass at the end of the year twenty-four florins.'

Upon this John Schmid set about showing his sons how they might earn their bread. He desired them to go in different directions to collect the following articles: first, bones, the largest of which they could sell to the turners, who made them into various useful and ornamental articles, while the smaller were required by farmers for manure. Secondly, pieces of broken glass, to be disposed of to the glass-workers for recasting. As it was spring, he charged them to get together all the rose-leaves and elder-blossoms which fell in their way, and for which apothecaries gave good prices. He also reminded his sons, that by a little inquiry the chemists would point out what other plants and roots they required. Upholsters would purchase cows' hair, saddlers, coach-makers, and chair-makers, horse hair. Besides these articles, he mentioned rags for paper-makers, bristles for brush manufacturers, quills, pins, hedge-wool, birdweed, and several other things which might be turned into money with no other trouble than that of seeking out and collecting them.

The sons did as they were desired, under the guidance of their father. During the spring and summer they collected and sold with such success, that their profits daily augmented.

When autumn came, they sought things of a different kind. Wherever they could obtain permission they gathered wild fruits, some of which could be made into vinegar and other useful articles. From the woods they obtained quantities of acorns and the seeds of other species of trees, for which they obtained a good price sometimes from foresters, at others from grain-dealers. They also got together heaps of horse-chestnuts, and took them to the mill to be ground. The miller thought they were going to eat this bitter flour, and made himself merry at the expense of their curious taste; but John Schmid's sons let him laugh, and took their horse-chestnut-flour to the bookbinders, card-board-makers, and others who make use of paste, the glutinousness of which it increases. Immediately after a warm shower, the young Schmid sought for mushrooms, which they disposed of to the epicures of the neighbourhood.

Having saved a quantity of birch-twigs, rushes, and osiers, the old man and his sons occupied the winter months in making brooms, chair-bottoms, and baskets, so that their cottage appeared both like a warehouse and a workshop. In this way the spring returned, and old John Schmid thought it advisable to see what had been gained during the year. On opening the box in which the cash was deposited, he found that each of his three sons had contributed more than a batz a-day of savings, for the money-box contained 104 florins and 23 kreutzers. At the sight of the hoard the sons were delighted, for they had never before seen so large a sum at once. John Schmid immediately carried the money to a wholesale tradesman in a large town, and deposited it with him at interest.

John Schmid, now no longer a beggar, employed himself solely in helping his sons to sell off the merchandise they collected. This went on for four years, at the end of which the family had amassed 614 florins! As, however, their riches increased, the young men grew independent in their manners, and disputed amongst themselves; one accusing the other of not working hard enough, of selling too cheaply, or of extravagance in treating himself to a cup of wine rather too often. Poor old Schmid!—do all he could, he was unable on some occasions to settle these discussions. Nothing seemed likely to cure the evil but separation; and addressing his sons, he said, 'Take each of you one hundred florins, and seek your fortunes in the world; industry and economy always prosper. The rest of the capital shall remain in the hands of the banker, in case that any unforeseen misfortune should fall on any of us so as to need it. But while it remains untouched, the interest will be added to the principal.' To this the

* The above is abridged, with the approbation of the author, from Mr D. L. Richardson's *Literary Leaves*. It meets views which we have ourselves long entertained on the subject.

young men agreed; and taking each his apportioned sum, bade adieu to their father. They took their departure, each in a different direction. Pierre went eastward, Gabriel westward, and George towards the south. John Schmid grieved to part with his children; but he knew it was for their good, and bore his regrets in silence.

Years rolled on. John Schmid grew old and weak, but he would not touch a kreutzer of his children's capital. At length he fell ill; and some of his neighbours, pitying his lonely state, sent him relief; others declared they had poor enough of their own to support, and though he had lived in their village for twenty-one years, threatened to send him away as a stranger. Upon this old John wrote to the merchant who held the money, saying, 'Send me 300 florins of the capital I deposited in your hands; for I am aged and weak, and for fourteen years I have not heard of my children. Doubtless they are dead. It will not be long ere I follow them to the grave.'

The honest merchant promptly replied to the old man's demand. 'I return you,' he wrote, 'the sum you ask. The balance remaining is perhaps greater than you imagine. It has increased, little by little, to more than 1000 florins.'

When the money arrived, the peasants stared with wonder, and declared that John Schmid must be a conjurer. But the old man himself, in spite of his riches, was unhappy. He wished to join his sons, whom he thought to be no more. He would often exclaim, 'I shall die in solitude; no son is left to close my eyes.' However, he recovered from his illness, and it was destined that he should not die alone.

One Sunday evening he was seated with other peasants under a linden-tree, when a servant on horseback rode up, and inquired if any one could direct him to the cottage of John Schmid? The villagers, full of astonishment, replied, 'You need not seek him in his house, for he is here.' As they stared and whispered inquiries to one another as to what was to come next, two handsome carriages entered the village, and stopped before old Schmid's door. Three well-dressed gentlemen and two ladies descended from the coaches, and as old John made his appearance, threw themselves successively into his arms. 'My dear father,' said the eldest, 'can it be possible that you have forgotten us? I am Pierre. I have become a wholesale grocer at Varsovie, in Poland, and this lady is my wife.' Then the second spoke:—'I am your son Gabriel, and also bring you a daughter-in-law. I, too, reside at Varsovie, and deal in corn.' Presently the third son came forward. 'I,' he said, 'am George. I have recently returned from India, where I made a fortune by commerce. Seeing by the Gazettes that my brothers were in Poland, I joined them, and we all agreed to travel hither to seek you, and to make you happy for the rest of your life.' Poor John Schmid was quite overcome, and shed tears. He invoked blessings on his children. 'To you,' exclaimed one of them, 'we owe all our good fortune. Had you not taught us that nothing, be it ever so despised, is useless—had you not made us industrious, persevering, and economical, we should still have been mendicants.'

The rest of John Schmid's life was spent in happiness, for one or other of his sons always remained with him. The money, which had accumulated during their long absence, was drawn from the merchant in whose hands it had so much increased, and employed in building a school for the gratuitous education of poor children.

To those who, like me, were aware of the means by which the Schmid's grew rich, their rise in the world is known to be the certain result of integrity, industry, and perseverance in turning to account things generally considered useless. Spite, however, of all I can urge, one or two of the more prejudiced villagers shrug their shoulders when John Schmid's name is mentioned, and insinuate that he must have made a compact with a certain nameless person.

A COMPLETE CONCORDANCE TO SHAKSPEARE.

The plays of Shakspeare have become a text-book of such extensive reference, that a verbal index to all the passages must be regarded as of the greatest utility. This desideratum has been supplied by Mrs Cowden Clarke, who, with wonderful patience and perseverance, has employed herself during twelve years in arranging alphabetically every word used in the thirty-seven plays, and indicating against it the act and scene in which it occurs, printing at the same time so much of each passage in which the expression occurs, as to show the inquirer that it is the one he may be seeking. Thus, under the word 'Apothecary,' we find—

Bid the apothecary—2 *Henry VI.* iii. 3.
Civet, good apothecary, to sweeten my—*Lear*, iv. 6.
I do remember an apothecary—*Romco and Juliet*, v. 1.
What, ho! apothecary. Who calls so loud—*Romco and Juliet*, v. 1.
O true apothecary, thy drugs are quick—*Romco and Juliet*, v. 3.

The concordance is published in monthly parts; and we trust that the persevering authoress will be adequately repaid for the vast expenditure of time, labour, and patience, which her work has required.

AN ENIGMA.

'Tis seen each day, and heard of every hour,
Yet no one sees, or ever hears its power;
It is familiar with the prince and sage,
As well as with the peasant. In each age,
Since time began, it has been known full well;
And yet nor earth nor heaven nor even hell
Has e'er contained it, or e'er known its worth.
It does exist, and yet it ne'er had birth;
It nowhere is, and yet it finds a home
In almost every page of every tome;
The greatest bliss to human nature here
Is having it to doubt, and dread, and fear.
It gives us pain when measuring the esteem
Of those we fondly worship in Love's dream.
It gives us pleasure instantly to hear
From those we love; sweet friendship it can rear.
Thought cannot compass it, yet ne'ertheless
The lip can easily its sense express.
'Tis not in sleep, for sleep hath worlds of dreams;
Yet plain and easy to each mind it seems,
For men of all degrees and every clime
Can speak of it. Eternity nor time
Hath it beheld. It singularly sounds
To foreign ears. Title, wealth, and fame,
However great, must end in it the same.
It is, is not. It can be heard, although
Nor man nor angel e'er its sound can know.

COMMON LIFE.

The cares, and toils, and necessities, the refreshments and delights of common life, are the great teachers of common sense: nor can there be any effective school of sober reason where these are excluded. Whoever, either by elevation of rank or peculiarity of habits, lives far removed from this kind of tuition, rarely makes much proficiency in that excellent quality of the intellect. A man who has little or nothing to do with other men, on terms of open and free equality, needs the native sense of five to behave himself with only a fair average of propriety.—*History of Enthusiasm.*

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